Confederated Salish and Kootenai Tribes Response to Topic II – Verification of the volume of irrigation water deliveries – found in Proposals of the Flathead Joint Board of Control of the Flathead, Mission, and Jocko Valley Irrigation Districts for modifications to the existing Water Use Agreement of the Flathead Compact for consideration by the 2015 Montana legislature. FJBC proposal dated October 8, 2014 and submitted to WPIC.

Seth Makepeace, CSKT Hydrologist, October 29, 2014

The following points are directed to topic II – the water volume verification component of the FJBC proposal cited above.

The Flathead Joint Board of Control (FJBC), on page 6 of their proposal, characterize recent reviews of the modeling on which the former Water Use Agreement (WUA) is based as follows. "the recent reviews of the modeling on which the WUA is based demonstrates that while it may be "reasonable" for planning purposes, it is not adequate for use in making actual allocations of Project water and in-stream flows and cannot protect historic irrigation uses. This supposition is completely inconsistent with the findings of the WPIC technical committee, which on page 6 of their report states - " With some qualifications outlined in the following pages, the modeling used to build a quantitative foundation for the CSKT water rights settlement is reasonable. Additional modeling is necessary for irrigation to practically function under the terms of the proposed compact." The WPIC technical committee found the modeling tools reasonable for the quantitative foundation of the settlement, and as recently as the October 27, 2014 public negotiating presentation, a RWRCC negotiator identified the modeling work as "good." The FJBC assertion is completely inconsistent with the record of review on the modeling work.

The FJBC recurrently references "historic deliveries" (see page 7 for example) as a standard which must be met by the proposed Compact. Since the FJBC does not quantify this term, one measure of this term might be the published FIIP Crop reports for the period prior to full implementation of the Interim Instream Flows. For the Mission Valley for the 1971-1988 period, the average reported onfarm delivery was 0.96 acre-feet/acre. For the Little Bitterroot Valley for the 1968-1988 period, the average reported onfarm delivery was 0.94 acre-feet/acre. However, these values are not cited by the FJBC. The Tribes, and other parties to the compact, have often indicated the need to protect historic crop irrigation consumption and a reasonable level of onfarm efficiency, and are able to quantify this term using an approach which was cross-referenced by DNRC technical work and found reasonable by the WPIC technical committee. An un-quantified term, such as historic deliveries, would embed the large inefficiencies that occur across the FIIP, reverse the objective to modernize the project, and be inconsistent with the concept of a negotiated solution to water allocation.

The FJBC has incorrectly focused attention on the need for Operational models to support the compact, and suggests that the HYDROSS model cannot be used to look at historic uses (see page 7 for example). This is not a correct conclusion; the HYDROSS model is a priority-based allocation model, constructed in the current application, to look at historic uses over the 1983-2002 period. An Operational model would be used to look at real-time conditions and forward looking, within-season

water distribution over short time horizons, and is unlikely to be a suitable tool for water rights allocation over varied climatic conditions. The Tribes have long recognized the need for Operations models to manage instream flow and irrigation water in real-time, and this is one of the Adaptive Management tools identified in the current version of the Compact.

The FJBC, on page 8, identifies that "the Technical Work Group found that agronomic principles do not support their consumptive use determinations." This assertion of the FJBC is completely inconsistent with the findings of the WPIC technical working group, as found on page 33 and Table 4 of their report.

The FJBC, starting on page 8 incorrectly suggests there is no technical basis for the instream flow numbers. As the FJBC negotiators leading up to the 2013 legislative session were completely aware, and as is emphasized in the WPIC technical work group report, the instream flow values are based on a balanced water budget which seeks to preserve historic crop irrigation consumption and reasonable onfarm efficiencies on the FIIP. As is pointed out by the technical workgroup Report of Findings, application of an instream flow methodology would likely have led to larger instream flow numbers. This outcome would likely reduce irrigation water supply.

The FJBC, on page 8, indicates that the CSKT must provide additional scientifically verified data to justify the need for increased instream flows. Recognizing the basis for the instream flows was the water left after historic crop irrigation consumption and reasonable onfarm efficiencies, the HYDROSS model and inputs form a key data source to examine the instream flows. During active negotiations leading up to the Water Use Agreement, the FJBC technical contractor received all of the technical materials they requested to support their evaluation of the HYDROSS model. This included fulfilling, at minimum, 29 data requests by the FJBC technical contractor. This was the same, or similar, information set provided to the WPIC technical work group to support their work. Considered in a different light, why has the FJBC not produced any irrigation water use data to support the compact process? The FIIP is operated on O&M assessments from the irrigators, and there is little to no evidence that the O&M assessments have been directed to water measurement on the FIIP, since at least the mid-1980's.

Consistent with the previous point, the FJBC cites to a 1939 hydrologic report on the FIIP to define a required historic diversion which should be met on the FIIP. This report – termed the Hodges report – provides a detailed water budget for the project over the 1934-1939 time period. Drawing from the report, the FJBC recommends a historic delivery amount of 625,000 to 725,000 acre-feet. The Tribes reviewed the same report and found the FJBC is recommending a historic delivery which exceeds the total available water supply, including trans basin inflows and Flathead River pumping by approximately 35%; this in a time period when instream flows were not part of the water management on the Reservation. This recommendation is illustrative of the FJBC's lack of commitment to support technical review of the work which forms the basis for the CSKT water rights compact.

Finally, the Tribes note with some irony, that the FJBC provides a quote on page 9 as follows – "you cannot manage what you cannot measure." The Tribes commitment to support measurement of the Reservation water resource to support water management is well recognized, and started in a

deliberative way in 1982. The measurement data input into the HYDROSS model, including daily flow for over 40 stream sites and 45 irrigation headworks and canal laterals, not only reflects that commitment but forms one cornerstone for the HYDROSS modeling work found to be reasonable to support the compact by each reviewing entity. The FJBC, on the other hand, ignored the wealth of technical information provided to them and cites to a 1939 report to request irrigation diversions which are in excess of the total water supply available to support both streamflow and irrigation demand.